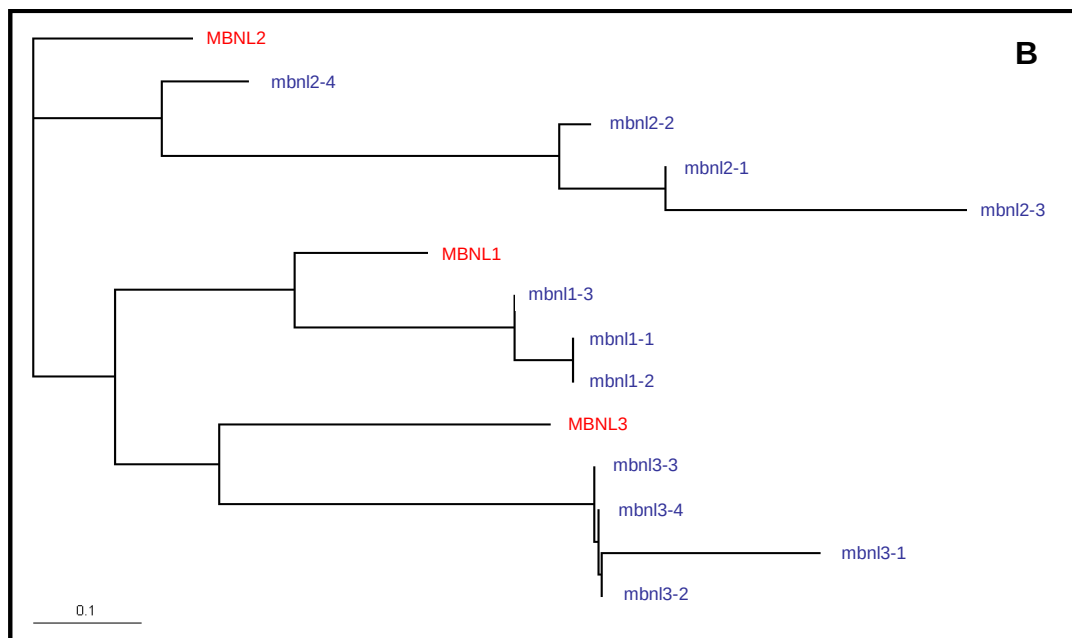


Supplementary Figures S1A and S1B

A

MBNL2	-MALNVAPVR	DTKWLTLEV	C	RQFQRGT	C	SR	SDEE	C	KFAH	P	PKSCQVENGR	VIA	C	F	D	S	L	K	G
MBNL3	MTAVNVALIR	DTKWLTLEV	C	REFQRGT	C	SR	ADAD	C	KFAH	P	PRVCHVENGR	VV	A	C	F	D	S	L	K
MBNL1	-MAVSVTPIR	DTKWLTLEV	C	REFQRGT	C	SR	PDTE	C	KFAH	P	SKSCQVENGR	VIA	C	F	D	S	L	K	G
mbn12	-MALNIASIR	DTKWLTLEV	C	RQFQRGT	C	SR	SDEE	C	KFAH	P	PKSCQVENGR	VIA	C	F	D	S	L	K	G
mbn13	-MAVNVMTGR	DTKWLTLEV	C	REFQRGT	C	SR	SDSE	C	KFAH	P	SRTCHVENGR	VIA	C	F	D	S	L	K	G
mbn11	-MAMNMAHMR	DTKWLTLEV	C	REFQRGT	C	AR	SDAE	C	KFAH	P	AKSCQVENGR	VIA	C	F	D	S	L	K	G
	*	*		*****	*	*****	*	*****	*	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
MBNL2	R	C	S	R	E	N	C	K	Y	L	H	P	P	H	L	K	T	Q	L
MBNL3	R	C	T	R	E	N	C	K	Y	L	H	P	P	H	L	K	T	Q	L
MBNL1	R	C	S	R	E	N	C	K	Y	L	H	P	P	H	L	K	T	Q	L
mbn12	R	C	T	R	E	N	C	K	Y	L	H	P	P	H	L	K	T	Q	L
mbn13	R	C	T	R	D	N	C	K	Y	L	H	P	P	H	L	K	T	Q	L
mbn11	R	C	S	R	E	N	C	K	Y	L	H	P	P	H	L	K	T	Q	L
	**	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MBNL2	P	V	G	P	A	I	G	T	N	T	A	-----	I	S	F	A	P	Y	L
MBNL3	P	M	T	P	S	I	P	A	N	P	P	-----	M	A	F	N	P	Y	I
MBNL1	S	V	A	P	S	L	A	T	N	A	S	-----	AA	A	F	N	P	Y	L
mbn12	P	V	S	Q	G	L	G	S	N	P	G	-----	L	S	Y	A	P	Y	L
mbn13	P	V	T	P	S	L	A	N	S	P	S	-----	M	A	F	S	P	Y	L
mbn11	S	V	S	P	S	L	A	S	N	A	S	AAAA	AAAA	A	A	F	N	P	Y
																**	*	*	*
MBNL2	-----	S	T	A	T	Q	K	L	L	R	T	D	K	L	E	V	C	R	E
MBNL3	-----	G	A	V	G	P	K	L	M	R	S	D	K	L	E	V	C	R	E
MBNL1	-----	AAAA	A	A	A	Q	K	L	M	R	T	D	K	L	E	V	C	R	E
mbn12	-----	S	S	S	T	Q	K	L	L	R	T	D	K	L	E	V	C	R	E
mbn13	-----	G	N	S	T	Q	K	H	V	R	T	D	K	L	E	V	C	R	E
mbn11	A	N	A	A	A	A	A	A	A	A	S	A	A	A	Q	K	L	L	R
												*	*	*	*	*	*	*	*
MBNL2	C	M	D	Y	I	K	G	R	C	M	R	E	K	C	K	Y	F	H	P
MBNL3	C	M	D	Y	I	K	G	R	C	S	R	E	K	C	K	Y	F	H	P
MBNL1	C	M	D	Y	I	K	G	R	C	S	R	E	K	C	K	Y	F	H	P
mbn12	C	M	D	Y	I	K	S	R	C	S	R	E	K	C	K	Y	F	H	P
mbn13	C	M	D	Y	I	K	G	R	C	T	R	D	K	C	K	Y	F	H	P
mbn11	C	M	D	Y	I	K	G	R	C	S	R	D	K	C	K	Y	F	H	P
	*****	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MBNL2	R	P	L	E	A	T	V	D	L	A	F	P	P	G	A	L	H	P	L
MBNL3	-----	AMA	L	Q	P	G	T	L	Q	L	I	P	K	R	S	A	L	E	K
MBNL1	R	P	L	E	A	T	F	D	L	G	I	P	Q	A	V	L	P	P	L
mbn12	-----	MA	F	P	H	G	V	L	Q	P	L	P	K	R	P	A	L	E	K
mbn13	-----	AMA	L	P	P	G	A	M	Q	Q	L	P	K	R	P	T	L	E	K
mbn11	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
												*	*	*	*	*	*	*	*
MBNL2	T	G	S	V	L	C	M	T	P	A	T	S	I	V	P	M	M	H	S
MBNL3	A	G	P	I	L	C	M	A	P	A	T	T	P	T	V	S	A	A	T
MBNL1	P	V	P	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
mbn12	T	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
mbn13	T	G	S	V	F	C	M	A	P	S	T	T	S	V	S	A	A	T	T
mbn11	L	R	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
																			*



Supplementary Figure S1

Characterization of *mbnl* in zebrafish. **(A)** Sequence alignment between human and zebrafish Muscleblind proteins. MBNLs contain four highly conserved CCCH zinc finger domains in two pairs spaced CX7CX6CX3H (yellow) and CX7CX4CX3H (blue) in both organisms. Low complexity alanine (red case) and proline-rich (blue case) regions are shown. Amino acid residues identical in all the Mbnl sequences analyzed are indicated by symbol “ * ”. Gaps introduced in the alignment are shown as hyphens. **(B)** Phylogenetic analysis of human and zebrafish Muscleblind-like proteins. Unrooted evolutionary tree for the different human and zebrafish isoforms analyzed in this study. The marker length of 0.1 corresponds to 10% sequence difference. Human proteins are highlighted in red and zebrafish protein isoforms in blue.